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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/652,114      | 08/29/2003  | Jay K. Bass          | 10004187-3          | 1844             |

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EXAMINER

FORMAN, BETTY J

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1634

DATE MAILED: 08/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

|                 |              |  |
|-----------------|--------------|--|
| Application No. | Applicant(s) |  |
| 10/652,114      | BASS ET AL.  |  |
| Examiner        | Art Unit     |  |
| BJ Forman       | 1634         |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 30-49 is/are pending in the application.
- 4a) Of the above claim(s) 40-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-39 and 44-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group I, Claims 30-39, 44-49 in the reply filed on 16 May 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 30-39 and 44-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 30-39 are indefinite in Claim 30 for the recitation "a flow cell from one flow cell to another flow cell". The recitation is indefinite because it is unclear how a flow is moved from one flow cell to another as recited. It is suggested that the claim be amended to clarify.

Claims 44-49 are indefinite in Claim 44 for the recitation "a flow cell from one flow cell to another flow cell". The recitation is indefinite because it is unclear how a flow is moved from one flow cell to another as recited. It is suggested that the claim be amended to clarify.

Claims 44-49 are further indefinite in Claim 44 for the recitation "said manifolds" because the recitation lacks proper antecedent basis in the singular "manifold" of line 5.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 30-39 and 44-49 are rejected under 35 U.S.C. 102(e) as being anticipated by Kedar (U.S. Patent No. 6,165,778, filed 2 July 1998).

Regarding Claim 30, Kedar discloses an apparatus for synthesizing an array of biopolymers on the surface of a support (i.e. synthesis results in each bead support comprising many copies of a peptide and DNA tag sequence thereby providing an array of biopolymers on the support, column 4, lines 57-63), the apparatus comprises a plurality of flow cells (e.g. 201-209, Fig. 1) a fluid dispensing station in fluid communication with the flow cells (e.g. top manifold, #212, Fig. 1), a station for monomer addition to the support surface (i.e. monomer reservoirs #231-239 and connection tubes #241-249, Fig. 1), and a mechanism for moving a support to and from the station for monomer addition (e.g. robotic pipetting instrument for bead transfer, (Column 62, lines 17-23).

Regarding Claim 31, Kedar discloses the apparatus further comprising a controller for controlled movement of the mechanism (i.e. automated robotic pipettors, Column 61, lines 47-50; Column 62, lines 18-23 & 41-45 & 55-61; and Column 63, lines 25-35).

Regarding Claim 32, Kedar discloses the apparatus wherein the mechanism is a robotic arm (Column 62, lines 41-45).

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Regarding Claim 33, Kedar discloses the apparatus wherein the flow cell comprises a chamber (#1114, Fig. 12B) a holder for the support (#210, Fig. 12B) and at least one outlet and inlet (#221 & 241, Fig. 1, Column 76, lines 41-43).

Regarding Claim 34, Kedar discloses the apparatus further comprising a manifold in fluid communication with the inlet (e.g. top manifold, #212, Fig. 1).

Regarding Claim 35, Kedar discloses the apparatus further comprising a purification system in fluid communication with the outlet (i.e. frit or filter #1102, for preventing substrates from entering the outlet thereby keeping the outlet pure of substrates, Column 76, lines 22-26).

Regarding Claim 36, Kedar discloses the apparatus further comprising a holding chamber in fluid communication with the purification system (i.e. tubes #271-279 and lower manifold #214, Fig. 1, Column 71, lines 31-41).

Regarding Claim 37, Kedar discloses the apparatus further comprising a sensor in fluid communication with the holding chamber (#101S-109S & 111S-119S, Fig. 1, Column 87, lines 1-21).

Regarding Claim 38, Kedar discloses the apparatus further comprising a sensor in fluid communication with the outlet (#111S-119S, Fig. 1 & 7, Column 73, lines 3-18).

Regarding Claim 39, Kedar discloses the apparatus wherein reagents for a step of synthesis are in separate fluid dispensing stations in fluid communication with one of the flow cells and reagent for another step of synthesis are in separate dispensing stations in communication with another flow cell (e.g. reservoir-reaction chamber alignment for selective reagent delivery, Column 72, lines 21-50).

Regarding Claim 44, Kedar discloses an apparatus for synthesizing an array of biopolymers on the surface of a support (i.e. synthesis results in each bead support comprising many copies of a peptide and DNA tag sequence thereby providing an array of biopolymers on the support, column 4, lines 57-63), the apparatus comprises a plurality of flow cells (e.g. 201-

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209, Fig. 1) at least one outlet and inlet (#221 & 241, Fig. 1, Column 76, lines 41-43) wherein each inlet is in fluid communication with a manifold (e.g. top manifold, #212, Fig. 1) and wherein each outlet is in fluid communication with a purification system (i.e. frit or filter #1102, for preventing substrates from entering the outlet thereby keeping the outlet pure of substrates, Column 76, lines 22-26), a holding chamber (i.e. tubes #271-279 and lower manifold #214, Fig. 1, Column 71, lines 31-41) and sensors (#101S-109S & 111S-119S, Fig. 1, Column 87, lines 1-21). The apparatus further comprising fluid dispensing stations (inlet tubes, #221-229, Fig. 1) in communication with the flow cells by means of a manifold (#212), a station for monomer addition (i.e. monomer reservoirs #231-239 and connection tubes #241-249, Fig. 1), a mechanism for moving a support to and from the station for monomer addition (e.g. robotic pipetting instrument for bead transfer, (Column 62, lines 17-23) and a controller for controlling the movement of the mechanism (i.e. automated robotic pipettors, Column 61, lines 47-50; Column 62, lines 18-23 & 41-45 & 55-61; and Column 63, lines 25-35).

Regarding Claim 45, Kedar discloses the apparatus wherein the mechanism is a robotic arm (Column 62, lines 41-45).

Regarding Claim 46, Kedar discloses the apparatus further comprising a purification system in fluid communication with the outlet (i.e. frit or filter #1102, for preventing substrates from entering the outlet thereby keeping the outlet pure of substrates, Column 76, lines 22-26).

Regarding Claim 47, Kedar discloses the apparatus further comprises a holding chamber in fluid communication with the purification system (i.e. tubes #271-279 and lower manifold #214, Fig. 1, Column 71, lines 31-41).

Regarding Claim 48, Kedar discloses the apparatus further comprising sensors in fluid communication with the outlet (#101S-109S & 111S-119S, Fig. 1, Column 87, lines 1-21).

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 30-39 and 44-49 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-33 of U.S. Patent No. 6,713,023.

Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to flow cell devices comprising a flow cell housing a substrate, fluid dispensing stations, monomer addition stations, means for mechanically moving the support. The claim sets merely differ in that the instantly claimed device comprises a plurality of flow cells.

However, the courts have stated that "Mere duplication of parts has no patentable significance unless new and unexpected result is produced" (see *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) and MPEP, 2144.05 VI). Therefore, the duplication of flow cells in the instant claim set is not patentably distinguished over the '023 device.

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9. Claims 30-39 and 44-40 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 23-28 of copending Application No. 10/172,470. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to flow cell devices comprising a flow cell housing a substrate, fluid dispensing manifold, stations for reagent delivery and mechanical means for moving the support. The claim sets merely differ in that the '470 claims are further drawn to a vacuum source. However, the instant claim language "comprising" encompasses the additional element of the '470 claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

#### **Conclusion**

10. No claim is allowed.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (571) 272-0741. The examiner can normally be reached on 6:00 TO 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.


Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the



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For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

  
BJ Forman, Ph.D.  
Primary Examiner  
Art Unit: 1634  
August 1, 2006